

The Waukegan Harbor AOC is a man-made commercial harbor located in Lake County, Illinois about 40 miles north of Chicago on the western shore of Lake Michigan. The AOC encompasses the man-made inner harbor and approximately 390 acres of surrounding land. Land use within the AOC is a mix of industrial, commercial, municipal, and vacant land. An Extended Study Area (ESA) was added to explore additional environmental concerns beyond the borders of the AOC. This ESA extends from the Dead River in the north to the southern boundary of the former U.S. Steel property in North Chicago and is bounded on the west by the bluff line near Sheridan Road and extends east to the nearshore waters of Lake Michigan.

Waukegan Harbor Area of Concern January 2019 Beneficial Use Impairment Update

Areas of Concern (AOCs) are Great Lakes rivers and harbors that have experienced serious environmental degradation and “significant impairment of beneficial uses”. Designated in a binational agreement between the United States and Canada called the Great Lakes Water Quality Agreement, This fact sheet highlights some of the progress that has been made towards the removal of Waukegan Harbor from the list of Great Lakes AOCs.

In 1975, polychlorinated biphenyl compounds (PCBs) were found in Waukegan Harbor as a result of manufacturing activities in the heavily industrialized harbor district. In 1987 Waukegan Harbor was designated as an AOC and 6 beneficial use impairments (BUIs) were identified due to chemical contamination.

What are Beneficial Use Impairments?

Beneficial Use Impairments (BUIs) restrict people’s ability to use the harbor, negatively impact fish and other aquatic life, or contribute to degraded water quality. To date, four out of the six BUIs that were designated for Waukegan Harbor have been removed. This means that the environmental impacts affecting those uses have been addressed and that aspect of the AOC has been restored.

<input checked="" type="checkbox"/> Restrictions on dredging activities	<input checked="" type="checkbox"/> Degradation of benthos	<input type="checkbox"/> Degradation of phytoplankton and zooplankton populations
<input type="checkbox"/> Restrictions on fish and wildlife consumption	<input checked="" type="checkbox"/> Loss of fish and wildlife habitat	<input checked="" type="checkbox"/> Beach closings

Current AOC Activities

- Illinois Natural History Survey scientists from the University of Illinois are conducting seasonal sampling of phytoplankton and zooplankton populations to identify any differences between populations in Waukegan Harbor and populations in Lake Michigan
- Illinois Department of Natural Resources Fisheries Division collects tissue samples from a variety of harbor species to measure chemical contaminants present in the fish that may be harmful to human health

AOC Accomplishments and BUI Removal Progress

2

☒ Beach closings (removed in 2011)

- This BUI was the result of high bacterial levels on AOC beaches, primarily due to gull activity and fecal contamination
- As a result of increased beach management activities (such as beach grooming and more trash receptacles), beach closings due to high bacterial levels are no longer an issue for the 2 beaches within the AOC

☒ Loss of fish and wildlife habitat (removed in 2013)

- Herbaceous and woody invasive species were actively managed within the AOC by the Waukegan Harbor Citizen's Advisory Group (CAG) from 2010-2016, with support from Great Lakes Restoration Initiative funding
- In 2012-2013, IDNR Coastal Management worked with the CAG to develop habitat management plans for the AOC and ESA
- Natural sand accretion north of the Waukegan Harbor breakwater has led to a 50% increase in dune and swale habitat within the AOC since designation

☒ Restrictions on dredging activities (removed in 2014)

- Over 130,000 cubic yards of contaminated sediment have been removed through environmental and navigational dredging
- Approximately 1 million pounds of PCBs have been removed
- PCB concentrations in harbor sediments are below the USEPA target level of 0.2 parts per million

☒ Degradation of benthos (removed in 2017)

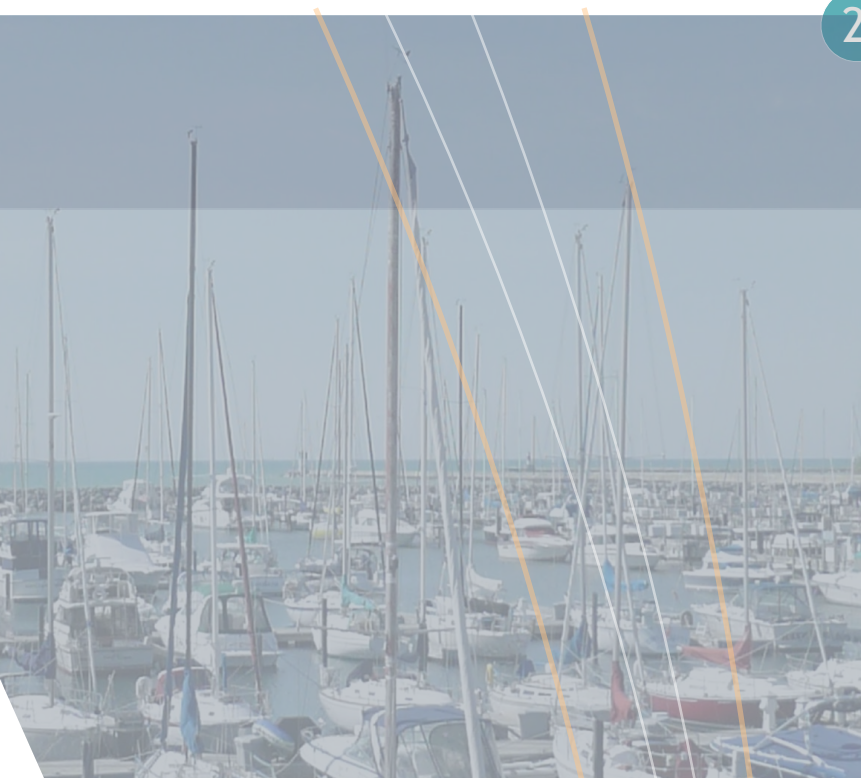
- Due to improvements in sediment quality after the completion of environmental dredging, the benthic community in Waukegan Harbor is similar to that of a non-AOC reference site
- Invertebrate taxa richness and biodiversity were found to be higher in the AOC than in the non-AOC reference site

☐ Degradation of phytoplankton and zooplankton populations

- Monitoring for this BUI is ongoing
- Preliminary results from 2017 sampling indicates location does not appear to be a significant indicator of plankton community composition
- Results from water toxicity tests show there is no notable difference in water quality between the AOC and Lake Michigan

☐ Restrictions on fish and wildlife consumption

- Monitoring for this BUI is ongoing
- Results from 2017 sampling show PCB concentrations in smaller-sized fish has decreased significantly since environmental dredging of the harbor has been completed



For more information, contact:
Danielle Nelson, Associate Ecologist
Illinois Department of Natural Resources Coastal Management Program, Chicago, Illinois
danielle.m.nelson@illinois.gov